## **A SUMMARY OF THE CLAIMS**

# 1. (Previously presented) An ester F of formula Ia

Ιa

### or formula Ib

(EO) 
$$n_3$$
 (PO)  $m_3$  (PO)  $m_4$  (EO)  $n_1$  (EO)  $n_1$  (EO)  $n_2$  (EO)  $n_2$  (EO)  $n_2$  (EO)  $n_2$  (EO)  $n_2$  (EO)  $n_2$  (EO)  $n_2$ 

### or formula Ic

(PO) 
$$m_3$$
 (EO)  $n_3$  (EO)  $n_3$  (EO)  $n_1$  (PO)  $m_1$  (PO)  $m_2$  (EO)  $n_2$  (PO)  $m_2$  (PO)  $m_2$ 

wherein AO is for each AO independently EO or PO,

EO is O-CH2-CH2-,

PO is at each instance independently O-CH2-CH(CH3)- or O-CH(CH3)-CH2-a sum of m1 + m2 + m3 + n1 + n2 + n3 is 3, 4, or 5, a sum of m1 + m2 + m3 is 1, 2, 3, or 4, a sum of p1 + p2 + p3 is 3, 4, or 5, and

Application No. 10/516,702 Response dated January 25, 2008 After Final Office Action of October 18, 2007 Docket No.: 29827/40663

R1, R2, and R3 are independently H or CH3, wherein at least one AO is PO and at least one further AO is EO.

- 2. (Cancelled)
- 3. (Cancelled)
- 4. (Previously presented) The ester F of claim 1 wherein the sum of m1 + m2 + m3 + n1 + n2 + n3 or p1 + p2 + p3 is equal to 3 or 5.
- 5. (Previously presented) The ester F of claim 1 wherein 3 POs are present in total.
- 6. (Previously presented) The ester F of claim 1 wherein at least one PO is present in each of the 3 alkoxy chains of glycerol.

7. (Previously presented) A process for preparing an ester F of claim 1 from an alkoxylated glycerol of the formula IIa, IIb, or IIc

Docket No.: 29827/40663

H (AO) 
$$p_3$$
 O (AO)  $p_1$  H (AO)  $p_2$  H

IIa

H (EO) 
$$n_3$$
 (PO)  $m_3$  (EO)  $n_1$  (EO)  $n_1$  H

IIb

H (PO) 
$$m_3$$
 (EO)  $n_3$  (EO)  $n_1$  (PO)  $m_1$  H (EO)  $n_2$  (PO)  $m_2$  H

IIc

wherein AO, EO, PO, n1, n2, n3, m1, m2, m3, p1, p2, and p3 are each as defined in claim 1,

and (meth)acrylic acid, comprising the steps of

- a) reacting the alkoxylated glycerol with the (meth)acrylic acid in the presence of at least one esterification catalyst C, at least one polymerization inhibitor D, and optionally a water-azeotroping solvent E to form the ester F,
- b) optionally removing from the reaction mixture some or all of the water formed in a), during and/or after a),
  - f) optionally neutralizing the reaction mixture,

Application No. 10/516,702 Response dated January 25, 2008 After Final Office Action of October 18, 2007 Docket No.: 29827/40663

- h) when a solvent E is used, optionally removing the solvent E by distillation, and/or
- i) stripping with a an oxygen-containing gas which is inert under the reaction conditions, wherein

a molar excess of (meth)acrylic acid to alkoxylated glycerol is at least 3.15:1 and

the optionally neutralized (meth)acrylic acid present in the reaction mixture after the last process step substantially remains in the reaction mixture.

- 8. (Cancelled)
- 9. (Cancelled)
- 10. (Previously presented) The process of claim 7 wherein the (meth)acrylic acid is not more than 75% by weight removed from the reaction mixture obtained after the last process step, which reaction mixture contains the ester F.

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- 11. (Previously presented) The process of claim 7 wherein the reaction mixture obtained after the last process step, which comprises the ester F, has a DIN EN 3682 acid number of at least 25 mg of KOH/g.
- 12. (Previously presented) The process of claim 7 wherein the reaction mixture obtained after the last process step, which comprises the ester F, has a (meth)acrylic acid content of at least 0.5% by weight.
- 13. (Previously presented) The process of claim 7 wherein the molar ratio of (meth)acrylic acid to alkoxylated glycerol in step a) is at least 15:1.

Application No. 10/516,702 Response dated January 25, 2008 After Final Office Action of October 18, 2007

- 14. (Previously presented) A process for preparing a crosslinked hydrogel, comprising the steps of
  - k) polymerizing an ester F of claim 1 or an ester F of the formula Ia

(AO) 
$$p_3$$
 (AO)  $p_2$  (AO)  $p_2$  (AO)  $p_2$  (AO)  $p_2$  (AO)  $p_2$  (AO)

wherein AO is for each AO independently EO or PO,

EO is O-CH2-CH2-,

PO is at each instance independently O-CH2-CH(CH3)- or O-CH(CH3)-CH2- a sum of p1 + p2 + p3 is 3, 4, or 5,

R1, R2, and R3 are independently H or CH3,

with (meth)acrylic acid, optionally an additional monoethylenically unsaturated compound N, and optionally one further copolymerizable hydrophilic monomer M, in the presence of at least one free-radical initiator K, and optionally of at least one grafting base L,

- 1) postcrosslinking the reaction mixture obtained from k),
- m) drying the reaction mixture obtained from k) or l), and
- n) optionally grinding and/or sieving the reaction mixture obtained from k), l), or m).
  - 15. (Previously presented) The process of claim 14 wherein AO is EO.

- 16. (Previously presented) The process for preparing a crosslinked hydrogel, comprising steps a) to i) of claim 7 and additionally
- k) polymerizing the reaction mixture from one of stages a) to i) if performed, with an optionally additional monoethylenically unsaturated compound N, and optionally at least one further copolymerizable hydrophilic monomer M, in the presence of at least one free-radical initiator K and optionally at least one grafting base L,
  - l) optionally postcrosslinking the reaction mixture obtained from k),
  - m) drying the reaction mixture obtained from k) or l), and
- n) optionally grinding and/or sieving the reaction mixture obtained from k), l), or m).
  - 17. (Cancelled)
- 18. (Previously presented) A crosslinked hydrogel comprising at least one hydrophilic monomer M in polymerized form crosslinked with an ester F of claim 1 or an ester F of formula Ia

$$(AO) p_3 \qquad (AO) p_1 \qquad R2 \qquad R1$$

$$(AO) p_2 \qquad (AO) p_2 \qquad Ia$$

wherein AO is for each AO independently EO or PO,

EO is O-CH2-CH2-,

PO is at east instance independently O-CH2-CH(CH3)- or O-CH(CH3)-CH2-a sum of p1 + p2 + p3 is 3 or

R1, R2, and R3 are independently H or CH3.

- 19. (Cancelled)
- 20. (Cancelled)

## 21. (Previously presented) A composition comprising

from 0.1% to 40% by weight of at least one ester F of claim 1 or an ester F of

#### formula Ia

$$(AO) p_3 \qquad (AO) p_1 \qquad R2 \qquad R1$$

$$(AO) p_2 \qquad (AO) p_2 \qquad R2 \qquad R1$$

wherein AO is for each AO independently EO or PO,

EO is O-CH2-CH2-

a sum of p1 + p2 + p3 is 3 or 4,

R1, R2, and R3 are independently H or CH3,

and (meth)acrylic acid,

0.5-99.9% by weight of at least one hydrophilic monomer M,

0-10% by weight of at least one esterification catalyst C,

0-5% by weight of at least one polymerization inhibitor D, and

0-10% by weight of a solvent E,

with the proviso that the sum total is always 100% by weight.

- 22. (Previously presented) The composition of claim 21 further comprising a diluent G, said diluent selected from the group consisting of water, a mixture of water and one or more organic solvent that is soluble in water in any proportion, and a mixture of water and one or more monohydric and/or polyhydric alcohol.
- 23. (Previously presented) A crosslinked hydrogel prepared from a composition of claim 21 and optionally postcrosslinked.
  - 24. (Cancelled)
  - 25. (Cancelled)

Application No. 10/516,702 Response dated January 25, 2008

After Final Office Action of October 18, 2007

26. (Previously presented) A crosslinked hydrogel of claim 14 having a saponification index of less than 11.

Docket No.: 29827/40663

- 27. (Previously presented) A crosslinked hydrogel of claim 14 having a residual crosslinker content of less than 10 ppm.
  - 28. (Cancelled)
- 29. (Previously presented) An article comprising a polymer prepared according to the method of claim 14.
- 30. (Previously presented) The article of claim 29 selected from the group consisting of a hygiene article, a packaging material, and a nonwoven.
  - 31. (Cancelled)
- 32. (Previously presented) The crosslinked hydrogel of claim 26 having a saponification index of less than 8.
- 33. (Previously presented) The crosslinked hydrogel of claim 26 having a saponification index of less than 5.
- 34. (Previously presented) The crosslinked hydrogel of claim 27 having a residual crosslinker content of less than 5 ppm.